AMPHIPOD NEWSLETTER 9[1]

October 1977

Again the newsletter is a few months delayed: my excuses are the same as in A.N. 8. I hope the quality has not suffered. Jim Lowry´s contribution on the life and works of Charles Chilton will no doubt be a most welcome aid for many of us, and Mike Thurston has written a thoughtful essay on regional amphipod faunas. There is also further news on the forthcoming Gammarus/Niphargus symposium in Virginia, and the promised updated list of subscribers, as well as the usual columns and bibliography.

The regional editors have been listed in AN 8, and the system functions very well. I am especially grateful to Les Watling for most effective assistance.

The deadline for A.N. 10 will be 1 december 1977.

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May 1978

Due to problems with Zoo-Tax, Wim Vader was unable to get AN 9 printed, so I am having it printed here at the University of Maine. AN 10, and probably future newsletters, will be printed here also. You should continue to send your news, dues, etc. to your regional editor or to Wim directly.

Les Watling
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[1] This newsletter was re-typed in 2017 from an old copy of the original newsletter. Sadly, some pages were not of a quality where all letters were visible. When it was impossible to reconstruct what was missing, … has been inserted to denote missing letters. Anne Helene S: Tandberg

A BIBLIOGRAPHY AND LIST OF THE AMPHIPOD SPECIES DESCRIBED BY CHARLES CHILTON (1860-1929)

Jim Lowry, The Australian Museum

Charles Chilton was born in Hereford, England, but grew up on a farm in East Eyreton, New Zealand. Probably because he lost a leg at an early stage it was decided that he would not be a farmer like his father. Consequently he attended Canterbury College in Christchurch, New Zealand, where he gained a BA in 1880 and an MA in 1881. In 1886 he received the first New Zealand BSc from Otago University, Dunedin, and in 1893 the first New Zealand DSc. He later took a medical degree at Edinburgh University. From 1910 to 1928 he was Professor of Biology at Canterbury College, and became Rector of the College in 1921. In 1907 he lead the Canterbury Philosophical Society Expedition to the New Zealand Subantarctic Islands and edited the two volume expedition results. A more detailed account of his life can be found in the obituary written by his friend and colleague G.M. Thomson (1930, Trans Proc. N.Z. Inst., 60(4): 587-589). Recently D.E. Huxley (1975, N.Z. Nat. Her., 3(43): iii) has written a biographical sketch of his life.

Chilton published about 130 scientific papers during his career. Although this work covered a wide range of Crustacea the majority dealt with amphipods and isopods. He published 71 papers on amphipods of which 24 contain new species descriptions. Nearly half of the 51 new species he described are in the families Gammaridae and Talitridae. More than half of his described species come from the New Zealand area, but he also worked on marine amphipods from the Antactic, and marine and freshwater species from Australia, India and the Phillipines. Chilton´s early taxonomic work is considered sound, but after his stay in the British Isles his taxonomic philosophy changed dramatically and he became a proponent of wide ranging, variable species. During this time, as Hurley (1975, Ibid.) says, "he searches for reasons to avoid describing species". However, regardless of this criticism, Chilton´s work forms the basis of New Zealand amphipod systematics, a basis superbly developed by D.E. Hurley and J.L. Barnard. Chilton´s books and bound reprint collection of over 50 volumes are housed at the University of Canterbury, Christchurch, New Zealand. The majority of his amphipod collection is deposited at the Canterbury Museum, Christchurch.

List of the new general and new species described by Charles Chilton. New genera are listed in upper case.

New species	Date	Present name
Acanthonotozomatidae		
Acanthonotozoma australis	1912 a	*Bathypanoploea australis*
Amphilochidae		
Cyproidia otakensis	1900 a	*Neocyproidea otakensis*
Ceinidae		
Nicea egregia	1883	*Ceina egregia*

Corophiidae		
Corophium ledenfeldi	1884 d	*Haplocheira ledenfeldi*
Eurysteus persetosus	1921 c	*Gammaropsis persetosus*
Grandidierella gilesi	1921 d	
PARANAENIA typical	1884 d	*Gammaropsis typical*
Podoceropsis insignis	1925 b	
Dexaminidae		
SYNDEXAMINE carinata	1914	
Eophilantidae		
BIRCENNA fulvus	1884 d	
Eusiridae		
Atyloides calceolate	1912 a	*Schraderia gracilis*
Calliope subterranea	1882 b	*Paraleptamphopus subterraneus*
Eusirus splendidus	1912 a	*Eusirus perdentatus*
Haliragoides australis	1912 a	
Moera incerta	1883	*Maera incerta*
Panoploea tuberculens	1884 d	*Apherusa translucens*
Gammaridae		
Crangonyx compactus	1882 b	*Paracrangonyx compactus*
Elasmopus bollonsi	1915	
Elasmopus neglecti	1915	
Gammarus barringtonensis	1916 c	*Paramelita barringtonensis*
Gammarus fragilis	1882 b	*Phreatogammarus fragilis*
Moera festiva	1884 a	*Melita festiva*
Neoniphargus westralis	1925 c	*Uroctena westralis*
Niphargus australensis	1923 c	
Niphargus chilkensis	1921 d	*Eriopisa chilkensis*
Niphargus indicus	1923 a	*Neoniphargus indicus*
Niphargus philippensis	1920 c	*Eriopisa philippensis*
Phreatogammarus halmsii	1918 a	
Phreatogammarus propinquus	1907	
..oriidae		
Platyischnopus neozlanicus	1897	
Ischyroceridae		
Podocerus frequens	1883	*Ventojassa frequens*
Podocerus latipes	1884 d	*Ventojassa frequens*
Liljeborgiidae		
Idunella chilkensis	1921 d	
Lysianassidae		
Alicella scotiae	1912 a	
ENDEVOURA mirabilis	1921 c	
Glycerina affinis	1884 a	*Amaryllis macrophthalma*

Orchomenopsis coatsi	1912 a	*Pseudorchomene coatsi*
Sebidae		
TETRATICUM typicum	1884 d	*Seba typica*
Stegocephalidae		
Cyproidea crassa	1883	*Tetradeion crassum*
Stenothoidae		
Thaumatelson inermis	1912 a	*Prothaumatelson nasutum*
Thaumatelson walkeri	1912 a	*Anatelson walkeri*
Talitridae		
Hyale grenfelli	1916 a	
Hyale saldanha	1912 a	
Hyalella mihiwaka	1898	*Chiltonia mihiwaka*
Orchestia bollonsi	1909 a	
Orchestia miranda	1916 a	
Parorchestia improvisa	1909 a	*Orchestia improvisa*
Parorchestia insularis	1909 a	*Orchestia insularis*
Parorchestia maynei	1909 a	*Orchestia maynei*
Parorchestia parva	1909 a	*Orchestia parva*
Talorchestia sinensis	1925 a	

CHILTON, C. 1882 a: Addition to the New Zealand Crustacea. Transactions and Proceedings of the New Zealand Institute 14: 171-174.

_____ 1882 b: On some subterranean Crustacea. Transactions and Proceedings of the New Zealand Institute 14: 174-180.

_____ 1883: Further additions to our knowledge of the New Zealand Crustacea. Tranactions and Proceedings of the New Zealand Institute 15: 69-86. Pls 1-3.

_____ 1884 a: Notes on a few Australian Eritophthalmata. Proceedings of the Linnean Society of New South Wales 9: 1035-1044.

_____ 1884 b: The distribution of terrestrial Crustacea. New Zealand Journal of Science 2: 154-157.

_____ 1884 c: *Moera petriei* (G.M. Thomson). New Zealand Journal of Science 2: 230-231.

_____ 1884 d: Additions to the sessile-eyed Crustacea of New Zealand. Transactions and Proceedings of the New Zealand Institute 16: 249-265.

_____ 1885 a: On an example of polymorphism in the Amphipoda. Annals and Magazine of Natural History, series 5, 16: 368-376, Pl 10.

_____ 1885 b: Polymorphism among the Amphipoda. New Zealand Journal of Science 2: 560-562.

_____ 1892 a: Notes on some New Zealand Amphipoda and Isopoda. Transactions and Proceedings of the New Zealand Institute 24: 258-269.

_____ 1892 b: On a tubicolous amphipod from Port Jackson. Records of the Australian Museum 2: 1-7, Pls 1, 2.

_____ 1897: A new amphipod from New Zealand (family Pontoporeiidae). Annals and Magazine of Natural History, series 6, 19: 1-6, Pl 5.

_____ 1898: A new freshwater amphipod from New Zealand. Annals and Magazine of Natural History, series 7, 1: 423-426, Pl. 18.

_____ 1900 a: A New Zealand species of the amphipodan genus *Cyproidea*. Annals and Magazine of Natural History, series 7, 5: 241-246, Pl. 5.

_____ 1900 b: The subterranean Amphipoda of the British Isles. Journal of the Linnean Society – Zoology 28: 140-161. Pls 16-18.

_____ 1906 a: Report of some Crustacea dredged off the coast of Auckland. Transactions and Proceedings of the New Zealand Institute 38: 265-268.

_____ 1906 b: List of Crustacea from the Chatham Islands. Transactions and Proceedings of the New Zealand Institute 38: 269-273.

_____ 1906 c: Note on a New Zealand amphipod belonging to the genus *Seba*. Annals and Magazine of Natural History, series 7, 17: 569-573.

_____ 1906 d: Note on some Crustacea from the freshwater lakes of New Zealand. Proceedings of the Zoological Society of London 1906: 702-205.

_____ 1907: A new freshwater gammarid from New Zealand. Annals and Magazine of Natural History, series 7: 19: 388-390, Pl. 11.

_____ 1909 a: The Crustacea of the Subantarctic Islands of New Zealand. 601-671 p. *In* "The Subantarctic Islands of New Zealand" Vol 2. C. Chilton (Ed.). John McKay, Wellington.

_____ 1909 b: The freshwater Amphipoda of New Zealand. Transactions and Proceedings of the New Zealand Institute 41: 53-59.

_____ 1909 c: Note on amphipodan genera *Bircenna*, *Kuria* and *Wandelia*. Transactions and Proceedings of the New Zealand Institute 41: 59-63.

_____ 1911 a: Note on the dispersal of marine Crustacea by means of ships. Transactions and Proceedings of the New Zealand Institute 43: 131-133.

_____ 1911 b: The Crustacea of the Kermadec Islands. Transactions and Proceedings of the New Zealand Institute 43: 544-573.

_____ 1911 c: Scientific results of the New Zealand Government Trawling Expedition, 1907. Crustacea. Records of the Canterbury Museum 1(3): 285-312, Pl. 58.

_____ 1912 a: The Amphipoda of the Scottish National Antarctic Expedition. Transactions of the Royal Society of Edinburgh 48(2): 455-520.

_____ 1912 b: Miscellaneous notes on some New Zealand Crustacea. Transactions and Proceedings of the New Zealand Institute 44: 128-135.

_____ 1912 c: Note on *Orchestia parvispinosa* M. Weber, a terrestrial amphipod from Java. Notes from the Leyden Museum 34: 163-168, Pls 6, 7.

_____ 1913: Revision of the Amphipoda from South Georgia in the Hamburg Museum. Mitteilungen aus dem Naturhistorischen Museum 30: 53-63.

_____ 1914: A new amphipodan genus and species (family Dexaminidae) from New Zealand. Journal of the Linnean Society – Zoology 32: 331-336, Pls 26, 27.

_____ 1915: The New Zealand species of the amphipodan genus *Elasmopus*. Transactions and Proceedings of the New Zealand Institute 47: 320-330.

_____ 1916 a: A new species of the amphipodan genus *Hyale* from New Zealand. Annals and Magazine of Natural History, series 8, 17: 362-366.

_____ 1916 b: *Paraperusa crassipes* (Haswell), and amphipod of Autralasian seas. Annals and Magazine of Natural History, series 8, 18: 199-207, Pls 8.10.

_____ 1916 c: A new species of *Orchestia*. Transactions and Proceedings of the New Zealand Institute 48: 354-359.

_____ 1916 d: Some Australian and New Zealand Gammaridae. Transactions and Proceedings of the New Zealand Institute 48: 359-370.

_____ 1916 e: Some Amphipoda and Isopoda from Barrington Tops (4600 ft. alt.) N.S.W. Journal of Proceedings of the Royal Society of New South Wales 1: 82-98.

_____ 1917 a: Notes on the distribution of the amphipods, *Elasmopus rapax*, A. Costa, and *Maera inaequipes* (A. Costa). Journal of Zoological Research 2(1): 17-19.

_____ 1917 b: Further notes on the New Zealand amphipod *Hyale grenfelli*, Chilton. Annals and Magazine of Natural History, series 8, 19: 273-276.

_____ 1917 c: The identity of the two amphipods, *Ampelisca eschrichtii*, Krøyer, and *A. macrocephala*, Liljeborg, considered from an Antarctic point of view. Journal of Zoological Research 2(2): 75-93.

_____ 1917 d: The New Zealand sand-hoppers belonging to the genus *Talorchestia*. Transactions and Proceedings of the New Zealand Institute 49: 292-303.

_____ 1918 a: Some New Zealand Amphipoda belonging to the genus *Phreatogammarus*. Journal of Zoological Research 3(2,3): 81-86.

_____ 1918 b: Note on an abnormal appendage in the amphipod *Orchestia marmorata* (Haswell). Journal of Zoological Research 3(4): 97-99.

_____ 1919 a: The amphipod *Orchestia tucurauna*, Fritz Müller, of Brazil, redescribed from New Zeland speciemens. Annals and Magazine of Natural History, series 9, 3:375-386.

_____ 1919 b: *Ceina*, and aberrant genus of the amphipodan family Talitridae. Transactions and Proceedings of the New Zealand Institute 51: 118-129

_____ 1919 c: Destructive boring Crustacea in New Zealand. New Zealand Journal of Science and Technology 2(1): 3-15.

_____ 1920 a: Some New Zealand Amphipoda: No 1. Transactions and Proceedings of the New Zealand Institute 52: 1-8.

_____ 1920 b: The occurrence in Brisbane River of the New Zealand amphipod, *Paracorophium excavatum* (G. M. Thomson). Memoirs of the Queensland Museum 7(1): 1-8.

_____ 1920 c: Note on the occurrence in the river Ganges of the amphipod, *Ampelisca pusilla* Sars. Records of the Indian Museum 19(3): 79-80.

_____ 1920 d: The occurrence in the Philippine Islands of the fresh-water amphipod *Paracalliope fluviatilis* (G.M. Thomson). Philippine Journal of Science 17(5): 513-514.

_____ 1920 e: *Niphargus philippensis*, a new species of amphipod from the underground waters of the Philippine Islands. Philippine Journal of Science 17(5): 515-523, Figs 1-3.

_____ 1921 a: Two examples of abnormal antennae in the Crustacea Amphipoda. Annals and Magazine of Natural History, series 9, 8: 116-118.

_____ 1921 b: Some New Zealand AMphipoda: No. 2. Transactions and Proceedings of the New Zealand Institute 53: 220-234.

_____ 1921 c: Report on the Amphipoda obtained by the F.I.S: "Endeavour" in Australian seas. Biological Results of the Fishing Experiments carried out by the F.I.S. "Endeavour" 1909-1914. 5(2): 31-92.

_____ 1921 d: Fauna of the Chilka Lake. Amphipoda. Memoirs of the Indian Museum 5: 519-550.

_____ 1921 e: A small collection of Amphipoda from Juan Fernandez. 81-92 p. *In* "The Natural History of Juan Fernandez and Easter Island", Vol 3. C. Skottsberg (Ed.). Almquist and Wiksells Boktryckeri – A. – B. Uppsala.

_____ 1922 a: The Flora and Fauna of Nuyt´s Archipelago and the Investigator Group. No. 1 – The Amphipoda and Isopoda. Transactions of the Royal Society of South Australia 46: 34-38.

_____ 1922 b: Results of Dr. E. Mjöbergs Swedish Scientific Expedition to Australia 1910-13. 31 – Amphipoda. Kungliga Svenska Vetenskapsakademiens Handlingar 63(3): 1-11.

_____ 1923 a: Some New Zealand Amphipoda: No 3. Transactions and Proceedings of the New Zealand Institute 54: 240-245.

_____ 1923 b: A blind amphipod from a mine in Bengal. Records of the Indian Museum 25(2): 195-196.

_____ 1923 c: Occasional notes on Australian Amphipoda. Records of the Australian Museum 14(2): 79-100.

_____ 1924 a: Some New Zealand Amphipoda: No 4. Transactions and Proceedings of the New Zealand Institute 55: 269-280.

_____ 1924 b: Some New Zealand Amphipoda: No 5. Transactions and Proeedings of the New Zealand Institute 55: 631-637.

_____ 1925 a: On a species of *Talorchestia*. China Journal of Science and Arts 3(5): 283-284.

_____ 1925 b: Zoological Results of a tour of the Far East. The Amphipoda of Tale Sap. Memoirs of the Asiatic Society of Bengal 6: 531-539.

_____ 1925 c: A new blind fresh-water amphipod from Western Australia. Journal of the Royal Society of Western Australia 11(9): 81-84, Pls 4, 5.

_____ 1925 d: Some Amphipoda from the South Orkney Islands. Communicaciones del Museo Nacional de Historia Natural 2: 175-180.

_____ 1925 e: Some Amphipoda and Isopoda from the Chatham Islands. Records of the Canterbury Museum 2: 317-320.

_____ 1926 a: New Zealand Amphipoda. No. 6. Transactions and Proceedings of the New Zealand Institute 56: 512-518.

_____ 1926 b: Abnormal telson in the amphipod *Bovallia monoculoides* (Haswell). New Zealand Journal of Science and Technology 8(2): 109-110.

THOMSON, G.M. and C. CHILTON 1886: Critical list of the Crustacea Malacostraca of New Zealand. Transactions and Proceedings of the New Zealand Institute 18: 141-159.

REVIEW

Guide to the benthic marine amphipods of southern Africa, by Charles Griffiths, Cape Town, Trustees of the South African Museum, 106 pp. 1976.

By Michael H. Thurston

The immense increase in ecological studies in recent years has led to a corresponding increase in the demands made on taxonomists for the identification of specimens. At the same time the low priority or even active antagonism given to teaching and financial support of taxonomy throughout the world has led to a shortage of taxonomist. In a number of "difficult" but commonly occurring groups, of which the Amphipoda are a prime example, many taxonomists receive more requests for assistance than they can cope with. That most taxonomists have other responsibilities - administrative, ecological and so on – only compounds the problem. The increasing number of synecological papers dealing in part or in whole with supra-specific taxa is a reflection of the shortage og taxonomists and taxonomic ability.

The well-documented shallow-water amphipod faunas of the North Atlantic and Mediterranean lend themselves to the production of comprehensive regional faunal guides. Such faunal guides enable non-specialists to identify their collecitons with some accuracy, although it should be emphasised that even in these areas undescribed species and unresolved taxonomic problems still exist. In less well-known areas these difficulties are compounded and the pitfalls of producing and using a faunal guide are greatly increased. There comes a point at which a faunistic compilation for a fragmentary known fauna can be counter-productive except as a working guide to a specialist. The temptation to publish a regional fauna at too early a stage in the knowledge of that fauna is one which should be resisted despite the pressures of frequent requests for identifications of material by non-specialists. Once a faunal guide has been justified, produced and published, the author can have no direct control over how it is used by non-specialists. As the way in which such a fauna is produced can have considerable indirect bearing on the quantity and quality of data which it generates, the initiating responsibility is a heavy one.

With these strictures in mind, the recently published "Guide" can be assessed. The introduction begins with a brief justification for producing such a guide, emphasizing the scattered nature of the relevant literature and the problems that this poses. A short account of the historical background to studies within the area is followed by notes on collection, preservation and examination techniques together with, for the uninitiated, an explanation on how to use the identification keys. The main body of the "Guide"

begins with diagnoses of the Amphipoda and the four sub-orders, and diagrams to illustrate amphipod morphology. A key separating those families recorded in the area is accompanied by a warning against its use in other areas. Each family is diagnosed and the relationships with allied families discussed briefly. One or more keys are provided enabling specific identification to be made. Thumb-nail sketches of the diagnostic characters of most of the 300 or so species of gammarids and caprellids considered clarify the keys. Appendices include a check list of recorded species together with taxonomic and geographical data, and a glossary of terms used.

A reference to the five papers by Griffiths which led up to the "Guide" and the brief reference in the "Guide" itself make it clear that the sampling cover is hardly adequate for so great a region. With the exeption of the Cape Province area samples are sparse and very patchily distributed. Estuarine and littoral habits have been more adequately sampled than have sublittoral areas, particularly those beyond the continental shelf. The geographical area nominally covered – southern Africa south of 20°S, littoral to 1000m – seems over-optimistic. At the present state of knowledge narrower limits, both geographically and bathymetrically, probably would have been more appropriate, and would have prolonged the potential useful life of the "Guide".

The "Guide" is commendably free from errors, and those few which do exist are mostly typographical and unlikely to cause any confusion. The J.L. Barnard reference on p. 74 is to the 1962 publication, not 1972 as printed, and on p. 91 the Griffiths (1975) reference deals with material from *west* of Cape Agulhas. A map of the reion covered is provided, and it is a minor irritation that some of the localities in both text and Appendix are not included on it. This is probably of little concern to locl sers, but foreign workers will find it something of a nuisance. It is curious, in the section on sexing amphipods that no mention is made of the male genital papillae, surely a useful means of separating the sexes. Storing Amphipod particularly caprellids and long-legged or spinous form in tubes with cotton-wool plugs is not to be recommended: plastic or polystyrene rings, or cotton-wool plugs wrapped in tissue-paper are more satisfactory. Such closures greatly reduce the likelihood of entanglement and subsequent damage to delicate specimens. The addition of an index would have been advantageous.

These rather minor criticisms do not significantly detract from the value of the "Guide" which will be invaluable to any worker concerned with the benthic amphipods of South Africa and will surely fulfill the professed aim of stimulating further investigation of the group. At a price equivalent to L sterling 1.70 (about 3 U.S. dollars) it will be within the price range of most likely purchasers.

FOUTH INTERNATIONAL COLLOQUIUM ON *GAMMARUS* AND *NIPHARGUS* AND SECOND INTERNATIONAL SYMPOSIUM ON GROUNDWATER ECOLOGY
BLACKSBURG, VIRGINIA, U.S.A. – SEPTEMBER 10-16, 1978

June 1977
2nd Circular Letter

Dear Colleagues,

We are happy to inform you that there were 85 responses from 20 countries to our first circular letter regarding the 1978 conference in Blacksburg. The objective of the second circular letter is to bring a number of important items to your attention.

1. In summarizing the responses for the amphipod section of the conference, we noted a strong interest for systematics, ecology, physiology, and ethology and some interest for genetics. An interest was also expressed in having papers in subterranean and/or groundwater related amphipod genera other than *Niphargus* and *Gammarus*. Numerous subterranean amphipod genera were mentioned and papers on them are encouraged for the conference (e.g., *Crangonyx*, *Stygobromus*, *Bogidiella*, *Ingolfiella*, *Hadzia*, *Synurella*, etc.).

For the groundwater section of the conference, a number of interesting topics were suggested. Among them were papers on: a) isopods, bathynellids, harpacticoid copepods, thermosbaenaceans, miscellaneous subterranean crustacean groups, water mites, nematodes, etc.; b) pollution, population and community ecology of groundwater systems; c) dispersal and zoogeography; d) phreatic water faunas of different parts of the world; and e) biological ramifications of physic-chemical changes in groundwater habitats.

Some of you also suggested topics for informal evening discussion sessions and these have been condensed into five basic categories: a) Comparison of regional groundwater faunas, such as the Mediterranean – Caribbean areas; b) Strategies for protection of endangered and threatened groundwater species and ecosystems; c) Revisionary concepts of gammaroidean amphipod taxonomy, with emphasis on ancestral and derived characters,, evolutionary patterns, and creation of higher taxa; d) Ecological classification of groundwater fauna and standardization of groundwater biotype and ecosystem terminology; and e) Sampling techniques for groundwater fauna. Plans are being made for these discussion sessions to be held during the conference.

2. Preliminary Call for Papers: As a convenience to registrants, abstracts of the papers to be presented at the conference till be reproduced (as written), collated and distributed at registration. Abstracts are for information only and will not be considered as formal publication .

Deadline for receipt of both titles and abstracts will be 31 May 1978. Titles without abstracts will not be accepted. Any titles and abstracts received after 31 May 1978 will not be included in the conference.

Rules and regulations for preparation of abstracts must be strictly adhered to and are as follows:

a) Written in English, French or German
b) Typewritten, double spaced on one side of a single page corresponding to the example attached. The text of the abstract must be confined to the space and should not exceed approximately 200 words.
c) Abstracts should be sent to: Dr. Arthur L. Buikema, Jr.

Preparations are being made for publication of papers at the conference. Details will follow in the 3rd circular letter. Manuscripts to be considered for publication will be due during the week of the conference. Papers not received at this time will not be published in the proceedings.

3. A final proposal has been submitted to the National Science Foundation for partial support of the meeting and money for travel grants to support primarily our eastern European colleagues. The chances for funding appear good to excellent, but we probably will not have financial approval for funds until approximately six months prior to the meeting.

4. We would like to bring your attention to the possibility for post-conference field trips and pre- or post-conference visitation to North American museums.

    a) Arrangements for visiting the National Museum of Canada can be made by contacting Dr. E.L. Bousfield, National Museum of Canada, Museum of Natural Sciences, Ottawa, KLAOM8, Canada.

For the Smithsonian Institution, contact Dr. J.L. Barnard or Dr. T.E. Bowman, Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.

    b) Two field trips are being planned as follows:
        (1) A Two-three day excursion to see selected caves and karst groundwater habitats in the Powell Valley of southwestern Virginia. This area is about 200 miles west-southwest of Blackburg. The trip will be led by Drs. D.C. Culver and J.R.Holsinger. For further details please contact Dr. Holsinger.
        (2) A two to three day excursion to the Great Dismal Swamp and the Coastal Plain of southwestern Virginia. This trip will be led by Drs. A.L. Buikema and H.G. Marshall. For further details, please contact Dr. Buikema.

Both areas are near airports with connecting flights to other major points in the U.S.

5. A number of people have requested a letter of invitation to facilitate obtaining permission or a subsidy to attend the conference. If you desire a letter of invitation, please contact Dr. Buikema.

6. A third circular letter will be mailed to you in February 1978. Included will be a final call for papers, information on manuscript format for publication, information on housing and meeting accommodations, and details on travel to Blacksburg.

With best regards,

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ABSTRACTS OF UNPUBLISHED THESES

1. *Ecologie et echantillonnage des populations hyperbenthiques d'amphipods gammaridiens d'un ecosystème circalittoral de l'estuarie maritime du Saint-Laurent*

par
Michel BESNER

Départment des sciences biologiques, Faculté des arts et des sciences, Université de Montreal, Canada.

Mémoire présenté a la faculté des études supérieures en vue de l'obtention de la maitrise en sciences biologiques. Septembre 1976.

Mémoire constitué de trois articles autonomes er distincts

Le traineau hyperbenthique macer-giroo: adaptation pour l'echantillonnage quantitatif étage de la petite faune nageuse au voisinage du fond. 1 – 46

Régime saisonnier et journalier de lumière sous-marine, de temperature et de salinité dans un ecosystème circa-littoral de l'estuaire maritime du Saint-Laurent en 1970 et 1971. 1 – 34

Structure écologique annuelle des associations d'amphipodes gammaridiens dans l'hyperbenthos et l'endobenthos d'un fond vaseux circalittoral de l'estuarie maritime du Saint-Laurent en 1970 et 1971. 1 – 130

An abstract of the thesis of

Weldon S. BOSWORTH, Jr. for the degree of Doctor of Philosophy in Zoology presented on April 30, 1976.
Title: *Biology of the Genus Eohaustorius (Amphipoda: Haustoriidae) on the Oregon Coast.*
Abstract approved: Jefferson J. Gonor, Ph.D.

This study has identified several ecological and physiological differences between four species of the genus *Euhaustorius* inhabiting the sandy beaches of the Oregon coast. This study has also documented several population characteristics which not only contribute to the successful maintenance of populations in a rigorous environment but also may act in concert with the ecological and physiological differences to reduce competition between them. In addition, this study has identified several adaptations that serve to separate the niches of *Eohaustorius* spp. from the other abundant malacostracans.

The four species, *Euhaustorius washingtonianus*, *E. brevicuspis*, *E. sawyeri* and *E. estuarius*, although found in close proximity throughout most of their geographic range have their maximum abundances in different portions of the sandy beach habitat. *E. estuarius* is most abundant in brackish water habitats; *E. brevicuspis* in the high and mid intertidal regions on exposed beaches; *E. washingtonianus* in the low intertidal and shallow subtidal in both exposed and sheltered habitat, and *E. sawyeri* in the shallow subtidal on exposed coasts.

The principal differences between the four species included adult size; brood size and total fecundity; timing of the reproductive cycle; density; intraspecific dispersion; salinity and temperature tolerance and predators.

It was also determined that subtle distributional characteristics within *E. brevicuspis* probably act to both increase reproductive potential by decreasing the probability of interspecific matings, and to also maximize the protection of brooding females. Results of this study also suggests that the peak reproductive period of these species coincides with the time of greatest habitat instability when potential for dispersal to new habitats is greatest. During this time reproductivity is also at its highest and newly released juveniles would have the advantage of having readily available and abundant food supply.

Lastly, this study has verified that these four congeners warrant species rank not only because of their morphological differences but also because of their reproductive isolation.

3. *The Origin and Distribution of Shallow Water Gammaridean Amphipods in the Gulf of Mexico and Caribbean Sea with Notes on Their Ecology*

Larry Don McKINNEY, Biology Department, Texas A&M University, College Station, Texas 77843 ((713) 845-6133 ext. 62), USA.

The present study details the occurrence, distribution and origins of shallow water marine gammarideans in the Gulf of Mexico and Caribbean Sea. One hundred and forty species are diagnosed or discussed and keys to the families, genera and species are provided to further distinguish them. Twenty three new species are described and fully illustrated. They include species of the following genera: *Amphilochus* (2 species), *Ampithoe*, *Atylus*, *Ceradocus*, *Eriopisa*, *Eusiroides*, *Gammaropsis*, *Gitanopsis*, *Liljeborgia*, *Listrella* (3 species), *Maera*, *Megaluropus*, *Netamelita*, *Parametopella*, *Photis* (2 species), *Platyischnopus*, *Polycheira* and *Seba*.

The emphasis of study was the ecological grouping of epiphytic amphipods generally associated with either of two series of habitats (biotopes): 1) general soft bottom areas dominated by the physical substrate, or 2) special habitats dominated by a complex biological community on hard substrate or a biological substrate. The first series included: bays, lagoons, intertidal zones, and subtidal areas. The second series included: coral, serpulid and oyster reefs, tropical and temperate grass flats, submerged offshore banks, and offshore artificial substrates. 430 pages, _3 figures and 48 plates.

A limited number of copies (20) will be available after July 1, 1977. The copies will cost $25 each (includes handling and postage). Prepay – required. (see address, etc. above)

4. Summary of my Doctoral in Biology Thesis, presented at the Biology Institute of Bucharest, S.R. of Romania, last November 1976, with prof Bacescu as tutor.

Manolo ORTIZ

Contribution to the knowledge to the Gammaridean Amphipods of the Western Cuban Platform.

The scientific results obtained during 1972-1975 regarding the Benthic Gammaridean Amphipods of the Western Cuban Platform are pointed out. They are included original determination keys and figures for the 25 families, 41 genera and 73 amphipod species (one new genus, *Pseudamphithoides*, and five new species, *Tropichelura gomezi*, *Pseudoamphithióides bacescui*, *Nuuanu (...) muelleri*, *Mallacoota carausci* and *Meterophlias seticoxa*). A quantitative analysis of the amphipod biomass was made using Brillouin´s diversity index and the test "T" of Student, supplemented with the analysis of the inter-specific relationships of the amphipods, the symbiotic amphipods, the wood boring amphipods, the amphipods as stomacal contents of several Cuban fishes, the benthic amphipod distribution according to the most important Cuban biotopes, and a zoogeographical discussion of the most important found species. Finally, a summary of the history of amphipod

research all over the world, and in the Caribbean and the Gulf of Mexico is also given.

REQUESTS FOR INFORMATION, etc.

Cheluridae

I should like to correspond and/or exchange material with interested workers in the Florida Keys, Bahamas, and Caribbean area. I would also like to have a series of *Tropichelura*, *Chelura*, and *Nippochelura* from anyone who can spare some specimens. I have found an apparently new species of *Tropichelura* in the Florida Keys which I believe has recently been described as *T. gomezi* by Ortiz working in Cuba. I feel the initial description was not completely adequate and am planning a redescription if I can obtain the typematerial on loan.

James D. THOMAS

NEWS FROM COLLEAGUES

Jerry L. BARNARD: I have recently visited Australia and Africa before returning to the Smithsonian Institution in mid-December 1976. My three month stay with Margaret Drummond at Victorian Fisheries in Melbourne was most productive. Dhe has discovered the occurrence of *Cheirocratus*- like genera (3) in Tasmania and we are planning to work these up very soon. We worked up most of the taxa in the *Urohaustorius* group (16 so far) and made plans to cover many more segments of her vast collections in the next two years of study; the remaining Oedicerotids, *Paracalliope* and relatives, the remaining gammarid groups.

Gordon S. BOSWORTH, Jr: My Ph.D. dissertation entiteled "Biology of the genus *Euhaustorius* (Amphipoda: Haustoriidae) on the Oregon coast" was completed and defended at Oregon State University last April (see abstract p.--- (17 in original)). Presumably it will be available through University Microfilms in the near future.

Thomas E. BOWMAN: Work in progress – 1. Revision of genus *Primno* (Hyperiidea: Phrosinidae). Now considered monotypic, but actually contains at least 3 species. 2. Description of new terrestrial *Orchestia* from Galapagos islands.

Pierre BRUNEL: He is presently enjoying a "semi-sabbatical", and hopes to complete a number of papers for publication: Of his students, Michel Besner completed his Master's Thesis; this consists of three papers, which are available on loan (see p. --- (16 in original)).

Arthur L. BUIKEMA Jr: My students and I are currently working on an isolated spring form population of *Gammarus minus minus*. In this population the maximum size is 9 mm with an average adult size class of 6 mm. Reproduction occurs all year. All adult females have male genital papillae. By scanning EM and serial sections we are investigating the possibility that this population may be protandrous. Depending in the apparent sex of the animal, it appears that the papillae also may function as oviduct and vas deferens.

Kenneth H. BYNUM: I have finished a multivariate analysis of ecotypic variation in *Caprella penantis* in North Carolina. Principal variation is in size and robustness of the body and seems to be related to degree of wave exposure. In the future I hope to extend this study over broader geographic area, and perhaps also to look at life history variation along the east coast of the United States.

Edsel CAINE: is studying the reproduction, dispersion and community interaction in caprellids.

James R. CHESS: Our major effort during 72-75 concerned trophic relationships in organisms (assemblages) and their fish predators. Analysis of these data continues and we hope to have the ms completed by spring 1978. Our field work is now concentrated on the subtidal communities off Northern California. I viaualize many interesting problems with amphipods from this area.

William J. COOKE: I am a graduate student at the University of Hawaii, in the Zoology Dept, and also a taxonomist at the Marine Environmental Management Office of the Naval Ocean. Systems Command of the U.S. Navy. In the course of our studies, we accumulate a large amount of amphipod material, including at least one new species recently. I would very much like to hear of any European workers on Indo-Pacific amphipods.

Robert A. CROKER: Research of myself and students includes: RAC-1) Long-term studies of structure and dynamics of marine sand communities, particularly dominant haustoriid amphipod components 2) Autecological studies of *Melita nitida* 3) Differentiation of spatially separated populations of *Gammarus* species. Richard HAGER – Completion of Ph.D. thesis on *Amphiporeia virginiana*, including life history, behaviour and pelagic occurrence, and distribution related to physical factors. Manaf BEHBEHANI (from Kuwait) – Ph.D. thesis work on *Orchestia platensis*, including life history and ecology, development, and structure of associated wrack community. Clare McBANE – Ph.D. thesis work on *Hyale nilssoni*, including life history and ecology, fine structure of selected sensory structure, and amphipod-algal associations.

G. J. DADSWELL: I am currently working on the fauna of Passamaquoddy Bay (Bay of Fundy), with special interest in amphipods and mysids.

John DICKINSON: has just completed his Ph.D. thesis on the distribution of gammarid amphipods in abyssal waters off Oregon. He is presently working

on seasonal fluctuations and depth zonation of gammarids on the outer shelf of the Beaufort Sea.

Gary W. DICKSON: Papers in press 1. The importance of cave mud sediments in food preference, growth and mortality of the troglobitic amphipod crustacean *Crangonyx antennatus* Packard (Crustaeana) 2. (J.R. Holsinger & S.W. Dickson) Burrowing as a means of survival in the troglobitic amphipod crustacean *Crangonyx antennatus* 3. MS thesis (see A.N. 8. P. 15)

Iraida I. GREZE: In 1977 I'll begin preparing for the press another monograph "A key to the amphipods of the Ukrainan SSR".

Krzysztov JAŻDŻEWSKI: Paper in press (with Ewa Brzezinska-Braszczyk): Reproductive cycle of *Gammarus fossarum* Koch in Panzer (Crustacea, Amphipoda) in different thermic conditions. Papers in preparation: 1. A paper on the respiration of som eantarctic Amphipoda i.a. *Parathemisto gaudichaudii*, *Eusirus perdentatus*, *Byblis securiger* (with K.W. Opalinski) 2. A paper on the amphipods collected by 3 recent Polish Antarctic expeditions (with Cl. De Broyer)

Graham S. JOHNSON: The chapter "Crustacea Peracarida" for the series "Reproduction in Marine Invertebrates" (A.C. Giese & J.S. Pearse, eds, Academic Press) is complete and will hopefully go to press in 1977.

Diana S. LAUBITZ: My *Dulichia* paper is in press, and I am hoping to get something written on a small collection of Beaufort sea gammarids. I also try to find time for a collection of subantarctic caprellids, of much interest to me.

Gary LEWIS: I began graduate work with john Holsinger in fall 1976 and plan to do thesis research in the systematics of the cave species of *Crangonyx* in the interior low plateau region of the United States.

Don MAURER: Results of an ocean outfall survey in Delaware coastal waters showed the nearshore waters to be dominated by *Acanthohaustorius millsi* and *A. intermedius*, and the midshore habitat by the above two species plus *Parahaustorisu attenuatus*, *P. holmesi*, *P. longimerus* and *Protohaustorius wigleyi. P. longimerus* was the dominant species in shoal environments.

Clare McBANE: (see also sub CROKER): I am currently studying the ecology of *Hyale nilssoni* on New Hampshire open coastal and estuarine shores. In addition, the coexistence of this species with *H. plumulosa* at Nobska Beach, Massachusetts is being investigated.

... B. RHODES: I have recently collected some specimens of *Ingolfiella* sp. from 4-5 m depth just off the east coast of Florida (Hutchinson Island, 27° 20' N, 80° 12' W). I would like some help in identifying them as they are probably new species. They were collected from a shell hash and sand bottom with a Shipek grab.

Philip B. ROBERTSON: I have recently been involved in studies in the systematics and ecology of haustoriid amphipods in the Gulf of Mexico.

Herman O. SANDERS: I am interested in amphipod culturing in the laboratory, particularly *Gammarus*.

Craig STAUDE: has just completed a two year survey of 5 Puget Sound beaches and is now working on a baseline survey (intertidal – 10m) of the Strait of Juan de Fuca (seaward of Puget Sound).

Les WATLING: My work on the peracarids of the continental shelf off the state of New Jersey is coming along well. Thus far I have identified over 70 species of amphipods, of which there are 13 new species and 1 new genus. Good sediment and other ecological data are being taken by the Virginia Institute of Marine Science and this will be available. Beginning this spring I will be handling the amphipods from a similar study in the George's Bank region, all of which will improve our understanding of amphipod distribution along the east coast of the U.S. considerably.

D.J. WILDISH: From 1st August, 1977, for approximately 1 year, I will be on sabbatical leave in the University of Aberdeen. The address is:

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The purpose of the visit is to conduct joint experimental work with Dr. N.J. Poole on the ecology of the sediment/water interface and for me to learn some microbial techniques. Of particular interest to us is the "spring effect" macrofauna have on the development of anoxic conditions in sediments. Important in the Bay of Fundy for this are *Pontoporeia femorata* and *Casco bigelowi.*

Not much of my recent work has been concerned with amphipods, although a recent review, now available (Wildish, D.J. "Biased sex ratios in invertebrates", to be published in "Advances in invertebrate reproduction" with other contributions given at the International Symposium on Invertebrate Reproduction held in Kerala, India, 1975 (1977)), and bibliography (Wildish, D.J. "A selected bibliography of invertebrate sex ratio data" Fish. Mar. Serv. Dev. Tech. Rep. 630, 1976, 37 p.), owe their existence to my graduate work interest in sex ratio of *Orchestia* (Talitridae). The review attempts to encourage an experimental interest in the dynamics and demography of sex ratio. Amphipods are excellent subjects for such an attempt and I would welcome correspondence from anyone embarking on such a venture.

MAJOR AMPHIPOD COLLECTIONS

The Amphipod collection of the Zoological Museum Hamburg – Zoologisches Museum der Universität Hamburg – mainly consists of Gammaridea. During the Second World War the whole collection of the Zoological Museum was stored outside. In that way the collection of Amphipoda has been damaged and decimated, too. Today the collection of gammaridean Amphipoda includes 31 families with 369 species. Typematerial is present of 102 species and 11 subspecies.

The species are spread among the following families: Acanthonotozomatidae (8 species), Ampeliscidae (22), Amphilochidae (1), Ampithoidae (5), Atylidae (6), Calliopiidae (9), Cheluridae (1), Corophiidae (47), Dexaminidae (5), Eusiridae (25), Gammaridae (68), Haustoriidae (12), Hyalellidae (3), Hyalidae (6), Hyperiopsidae (1), Ischyroceridae (8), Leucothoidae (2), Liljeborgiidae (4), Lysianassidae (37), Melphidippidae (1), Oedicerotidae (24), Paramphithoidae (4), Pardaliscidae (4), Phoxocephalide (10), Pleustidae (9), Podoceridae (9), Sebidae (1), Stegocephalidae (8), Stenothoidae (11), Synopiidae (1), Talitridae (17). This list is based on nomenclature and systematics according to BARNARD (1958, 1969, 1973), BAZIKALOVA (1945), BULYCHEVA (1957) and GURJANOVA (1951).

The collection of Gammaridea predominantly includes material of European and adjacent seas, the Atlantic, and Lake Baikal. The Material encloses the collections of DYBOWSKI (Lake Baikal 1871), "I. Deutschen Polar-station 1882/1883" (south Georgia), KUKENTHAL (Spitzbergen), MICHAELSEN (Westcoast of Africa, Subantarctic), and last but not least a part of the "Typensammlung G.O. Sars". Furthermore the collection includes material sampled by captains (e.g. HUPFER, KOPHAMEL and PAESSLER). Reviser of the collection was above all SCHELLENBERG.

A paper "Verzeichnis der Typen aus der Sammlung Crustacea der Zoologischen Instituts und Zoologischen Museums der Universität Hamburg. Amphipoda, Gammaridea" (by ANDRES & LOTT) is in press.

LIST OF SUBSCRIBERS

I hope the addresses in this list are reasonably correct; if not, it is mostly my own fault, as I have copied earlier addresses in all cases where I did not receive corrections. Danièle Dumay and mr. Fearn-Wannan are omitted from the new list, as they are apparently no longer working on amphipods.

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The review of Tzvetkova´s book has to be postponed once more. Mike Thurston´s review of Charles Griffith´s book on S. African amphipods appears elsewhere in this issue.

Claude De Broyer and Jan Stock have again assisted by sending references, and, starting from this issue, Iraida Greze has sent lists of recent Russian papers, a very welcome addition. I am still waiting for offers to help me with "subterranean literature", Japanese and South American national journals, and the C.R. Acad. Sci Paris, all of which are of difficult access to me.

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LAST MINUTE ADDITIONS

News from colleagues

Jim LOWRY: I have had good response for *Cerapus* material and am getting on with the job. The New Zealand paper will be ready for submission soon and the Australian material is next on the list. No species appears to overlap between the areas.

We are also getting quite a lot of work done on Zealand and Subantarctic amphipods now in my lab and should be submitting some work from that project soon.

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